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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,495	10/28/2003	Alan Benson Norman	030627/253135	8177
826	7590	08/16/2006		
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER CORDRAY, DENNIS R	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/695,495

Applicant(s)

NORMAN ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/15/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 8-15 and 18-21 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Drake et al ( "On a Cell to Measure Diffusion Coefficients of Gases Through Cigarette Papers", Int. J. Heat and Mass Transfer, 23 (1980) 127-134).

Drake et al describe a procedure and apparatus for direct measurement of cigarette wrapping paper diffusion coefficients (p 127, Introduction). The apparatus comprises a two-chambered cell with the wrapping paper placed between and separating the two cells. Cells of a selected length can be used to expose the desired length of paper (i.e.-a length entirely within the width of a band) to analysis gas streams. An inert gas stream (nitrogen) flows through one chamber (first chamber), measured by a flow meter, and a gas stream comprising a detectable gas (CO) flows through the

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second chamber, also measured by a flow meter. Mass flow rates of gases through each chamber are the same. The steady state concentration of the detectable gas from the second chamber is measured by an analyzer (pp 127-128, Description of Cell).

Drake et al does not describe a paper having bands of differing properties, or that the paper is supplied on a roll or that an advancement device is used to advance the paper through the sampling device. Drake also does not describe use of a harmless gas as the detectable gas.

It would have been obvious to one of ordinary skill in the art to measure properties on alternating bands of a banded cigarette wrapping paper to determine the burn characteristics of the wrapper since the bands are typically provided in the paper to control the burn rate of a cigarette (see Allen et al, EP-0486213 A1, p 2, col 1, lines 30-38; col 2, lines 5-11). The paper after manufacture is typically rolled, thus it would have been obvious to supply the test paper from a roll and to provide an advancement device for feeding the paper into the sampling device. It would also have been obvious to use a harmless detectable gas that could be released to the atmosphere as a functionally equivalent option to simplify waste handling. It would have been obvious to use cells of a length such that the area analyzed is entirely within the width of a band so that the diffusion properties of the alternating bands could be measured.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drake et al in view of Cholet (WO 03/019132 A1, US 2004/0187560 used for English translation).

The measurement apparatus and method of Drake et al have been described above. Drake et al does not disclose control of the advancement device or of the analyzer via sensors. Drake et al also does not disclose configuring the analyzer to determine the diffusion coefficient of the paper with respect to the detectable gas.

Cholet discloses an automated apparatus and method for determining the permeability of a porous material having alternating porosity levels. The porous material can be a cigarette wrapping paper with bands of alternating porosity. An example paper is indicated as that disclosed by Allen et al, EP-0486213 (Abs; p 1, pars 1-2; p 2, par 27). The measurement apparatus comprises two chambers that engage at opposite sides of a sample paper and define a sample area that is smaller than the dimensions of the bands in the paper (p 1, pars 3-6; p 2, par 30). The supplied gas and pressure or vacuum in the two chambers can be regulated using flow meters. One chamber is connected to a measurement circuit (p 2, par 29). The measurement process is automated, with an advancement device (stepping motor and drive rollers) advancing the paper and the measurement device actuated after each advancement to make a measurement. Based on a series of measurements, the future action of the advancement device is determined and controlled. An attached processor performs calculations and controls the stepper motor. (p 1, pars 10-14; p 2, pars 31-44; Claim 7).

The art of Drake et al, Cholet and the instant invention is analogous as pertaining to the measurement of cigarette paper properties via a two chambered controlled gas flow apparatus having a gas analyzer. It would have been obvious to one of ordinary skill in the art to automate the diffusion measurements of Drake et al in view of Cholin to

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provide more data with less expenditure of time or money. It would also have been obvious to program the analyzer or attached processor to perform the calculations to provide the data in final usable form.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Stultz (4246775), Engle et al (US 2003/0074954)]. Stultz discloses a method for measuring porosity for a moving web or sheet. Engle et al discloses an apparatus for rapidly measuring the permeability of a barrier material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

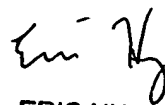
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DRC



ERIC HUG  
PRIMARY EXAMINER